second inter-process communication means for transmitting and receiving said data which are exchanged between said client and said server, between said second inter-process communication means and said server through an Internet by the virtual circuit type communications in conformity with the protocol of the upper layer with respect to said layers of said radio channel; and

a server comprising:

third inter-process communication means for transmitting and receiving said data which are exchanged between said client and said server, between said third inter-process communication means and said gateway through said Internet in conformity with said protocol of said upper layer with respect to said layers of said radio channel;

wherein said client and said gateway are connected through said radio channel, and said gateway and said server are connected through said Internet.

REMARKS

In the Office Action mailed October 3, 2002 the Examiner noted that claims 1-28 were pending, and rejected claims 1-28. Claims 14, 15, 23-25 and 27 have been amended, and, thus, in view of the forgoing claims 1-28 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections are traversed below.

In the Office Action the Examiner rejected claims 1, 12, 14-16, 23, 25-27 and 28 under 35 U.S.C. section 112 paragraph 2 as indefinite.

The Examiner noted an antecedent issue with respect to claims 27 and 28. Claim 27 has been amended in consideration of the Examiner's comments and it is submitted claims 27 and 28 satisfy the requirements of the statute.

The Examiner also alleged that claims 1, 12, 14-16, 23, and 25-27 were indefinite because the phrase "virtual circuit type" could read on a number of different types. In particular, the Examiner noted "ATM, LAN, WAN, computer networks and Internet" as possible types. The Examiner is correct that the claim reads on these many different types. And at this point in prosecution, such is intended. That is, the Examiner notes that the language is sufficiently definite to identify the broad types of virtual circuits that the applicant currently intends. Withdrawal of the rejection is requested.

The Examiner is requested to note that specification discusses the use of TCP in the virtual communication of the preferred embodiment. The use of TCP does segregate virtual

circuits into a particular type. The Examiner is invited to telephone the undersigned to discuss this if concerns with the clam language still exist.

If additional concerns with the claims arise, the Examiner is also invited to telephone to resolve the same. Suggestions by the Examiner are also welcome. Withdrawal of the rejection is requested.

Claims 14, 15, and 23-25 have been amended to make some minor changes thereto.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 3/3/3

By: _____
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims:

14. (Amended) A program recording medium storing therein programs which are employed for incarnating an apparatus for use in a radio communication system wherein the apparatus communicates with another apparatus through a radio channel, the programs causing a computer to execute processing comprising [the steps of]:

monitoring whether or not a transmission request for data, which designates the particular apparatus itself as a transmission destination, has been issued by said particular apparatus or the other apparatus connected thereto through a network;

generating a process to serve as a reception destination for the data and also generating a buffer in correspondence with the process, when the monitoring step has detected the issue of the transmission request;

transferring the data from a transmission request source to said process in accordance with communications of virtual circuit type, so as to store in the buffer the data transmitted by the transmission request source; and

transmitting the data stored in said buffer, to said other apparatus through the radio channel.

15. (Amended) A program recording medium storing therein programs which are employed for incarnating an apparatus for use in a radio communication system wherein the apparatus communicates with another apparatus through a radio channel, the programs causing a computer to execute processing comprising [the steps of]:

receiving data sent in through the radio channel;

monitoring whether or not the receiving step has received data which conforms to a protocol suspended in layers of said radio channel;

generating a process to serve as a reception destination for the data, when the monitoring step has detected the reception of the pertinent data; and

transferring the data received by the process, to a transmission request destination in accordance with communications of virtual circuit type.

23. (Amended) A data communication method for a radio communication system wherein apparatuses communicate through a radio channel, comprising [the steps of]:

[(a)] receiving data sent in through the radio channel;

[(b)] monitoring whether or not the received data conforms to a protocol suspended in layers of said radio channel;

[(c)] generating a process to serve as a reception destination for the data, when the reception of the data conforming to the protocol has been detected; and

[(d)] transferring the data received by the process, to a transmission request destination in accordance with communications of virtual circuit type.

24. (Amended) A data communication method as defined in claim 23, further comprising [the steps of]:

[(e)] storing data sent back from the transmission request destination in response to the data transfer, in a cache memory;

[(f)] making a search as to whether or not data requested by the data received through said radio channel is registered in the cache memory; and

[(g)] transmitting the requested data in said cache memory, to said transmission request source through said radio channel when said requested data is registered in said cache memory.

25. (Amended) A data communication method for a radio communication system wherein apparatuses communicate through a radio channel, comprising [the steps of]:

[(a)] transmitting data requested by a transmission source, in accordance with communications of virtual circuit type by employing a protocol of an upper layer with respect to layers of the radio channel;

[(b)] transmitting the data transmitted by employing the protocol of the upper layer, through said radio channel by employing a protocol of the layers of said radio channel; and

[(c)] transmitting the data transmitted by employing said protocol of said layers of said radio channel, to a transmission request destination in accordance with the virtual circuit type communications by employing said protocol of said upper layer with respect to said layers of said radio channel.

27. (Amended) A radio communication system, comprising:

a client comprising:

first inter-process communication means for transmitting and receiving data which are exchanged between said client and a server, by communications of virtual circuit type in conformity with a protocol of an upper layer with respect to layers of a radio channel; and

first radio communication means for transmitting and receiving the data which are exchanged between said client and said server and which are inputted to and outputted from said first inter-process communication means, between said first radio communication means and said server through said radio channel in conformity with a protocol of the layers of said radio channel;

a gateway comprising:

second radio communication means for transmitting and receiving said data which are exchanged between said client and said server, between said second radio communication means and said first radio communication means through said radio channel in conformity with the protocol of said layers of said radio channel; and

second inter-process communication means for transmitting and receiving said data which are exchanged between said client and said server, between said second inter-process communication means and said server through [said] an Internet by the virtual circuit type communications in conformity with the protocol of the upper layer with respect to said layers of said radio channel; and

a server comprising:

third inter-process communication means for transmitting and receiving said data which are exchanged between said client and said server, between said third inter-process communication means and said gateway through said Internet in conformity with said protocol of said upper layer with respect to said layers of said radio channel;

wherein said client and said gateway are connected through said radio channel, and said gateway and said server are connected through said Internet.